



Wood Buffalo Environmental Association
**Ambient Air Monitoring Station
Site Documentation**

Firebag

LAST UPDATED: MARCH 28, 2024



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General Site Information

Revision Date: March 28, 2024

Station

Station ID	AMS 19
Station name	Firebag
Date station established	2014

Location

Station street address	Firebag Camp
Legal land description	5-15-095-06 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	57.2395250989
Longitude	-110.897990073
UTM East	506157
UTM North	6344054
Nearest community	Fort McKay
Community population	757
Census Year	2021

Owner/Operator/Approval Holder

Operating Agency	Wood Buffalo Environmental Association
Address of Operating Agency	Unit 3-805 Memorial Drive, Fort McMurray, Alberta T9K 0K4
Name of Approval Holder	Suncor Energy Inc.
Approval number	80105-01-00
Contact Name	Sara Mazhar
Address	Suncor Energy, Fort McMurray
Phone number	780-743-7780 (business hours); 780-762-4200 (non-business hours)
Email address	smazhar@suncor.com

Site Description

Land use by sector	0 – 90 degrees	Oil sands development
	91 – 180 degrees	Oil sands development
	181 – 270 degrees	Oil sands development
	271 – 360 degrees	Oil sands development
Site elevation (m) (above sea level)		
Angle of elevation to nearby buildings	Greatest angle	0
	Building direction	NA
Airflow restrictions	North	No

	East	No
	South	No
	West	No
Distance to nearest trees (m)	North	NA
	East	NA
	West	NA
	South	NA
Sample manifold	Type	All glass
	Inlet height above roof	1 metre
Wind Sensors	Type	Cup and vane
	Height above ground (m)	10 m
	Distance from station (m)	0 m

Site Influences

Localized Sources (within 20 metres of station)

Type	Distance (m)	Description
Suncor Firebag	0	Oil sands development
Firebag Camp	20	Camp housing, cafeteria, heating system

Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Local Camp roads	Low	20	Camp traffic

Major Point Sources

Facility Name	Source Type	Distance from site (km)	Compass direction from site
Suncor Firebag	Oilsands	0	NA
Husky	Oilsands	10	WNW

Station Equipment

Equipment Owner: Suncor

Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
SO ₂	Thermo Environmental	43i	1410661308	2016	August, 2014
H ₂ S	Thermo Environmental	43i-TLE	1151680032	2023	August, 2014
NO/NO _x /NO ₂	Thermo Environmental	42i	1410661309	2016	August, 2014
THC	Thermo Environmental	51i	1336160089	2016	August, 2014

Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	K2870021	3	2016	August, 2014
WS	Met One	010C-1	W15276	1	2021	August, 2014
WD	Met One	020C-1	A23968	1	2016	August, 2014

Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	6466
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	1607
Zero air generator	Zero Air Generator	Teledyne/API	701	1118
Shelter / Building	Air monitoring portable	ITB	8 x 16 trailer	ITB14-16269
HVAC	Heating and air conditioning system. Wall mount unit	BARD	1 ton	NA
Tower	10m Tower	Aluma Tower	T-135	AT213028-Y-3
H ₂ S converter	H ₂ S converter	Global Analyzer Systems	G150	2022-222

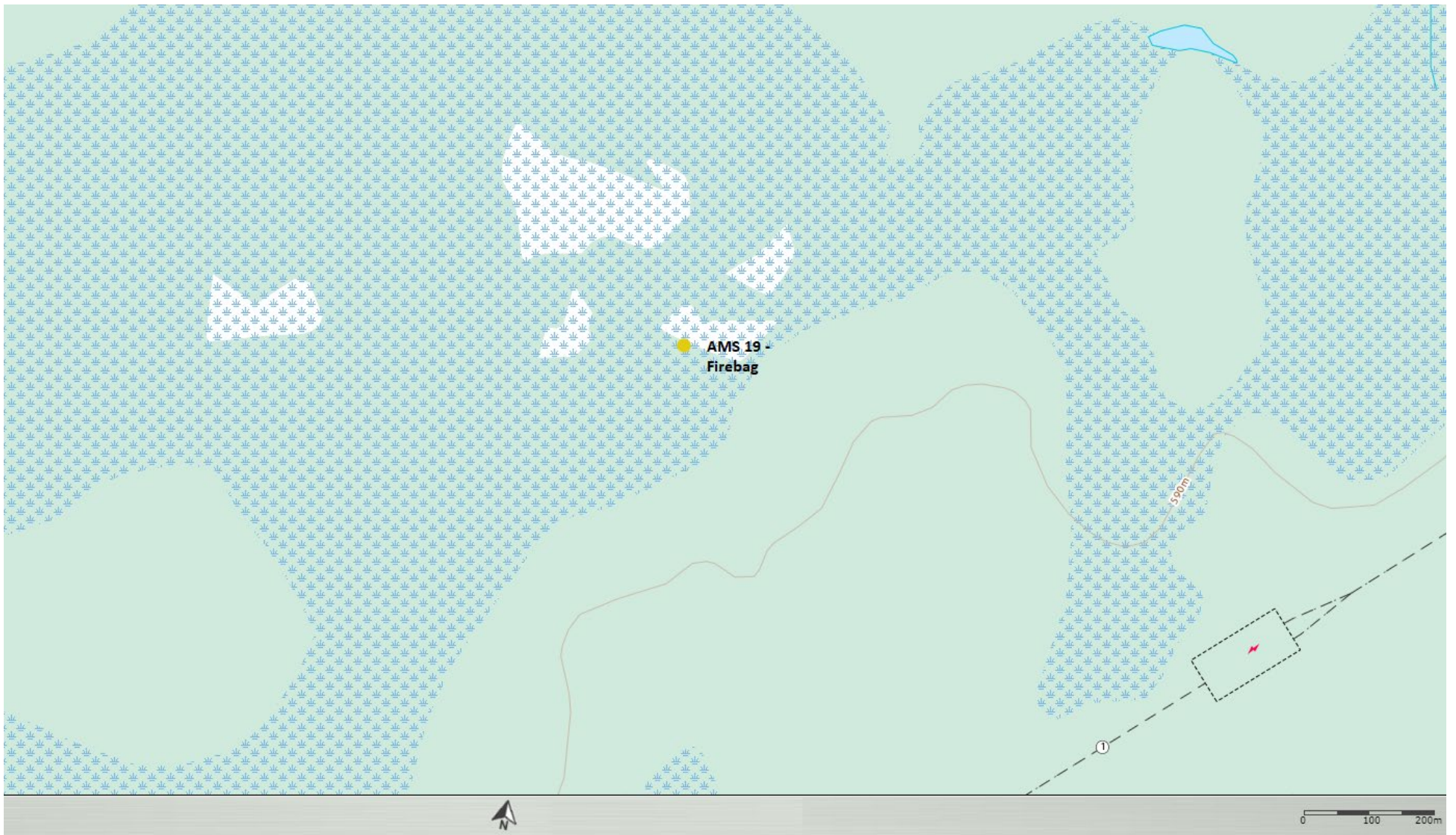


Figure 1 – Area topographic map showing AMS 19



Station Name: AMS 19 - Firebag



Obstacle	Distance from the station (m)	Height of the Obstacle (m)
1 - Pond	45	0
2 - Pond	50	0
3 - Building	20	3
4 - Building	80	3
5 - Brush	10 - 20	1 - 3

Figure 2 – Plan view sketch for AMS 19 – Firebag



Figure 3 – Aerial photo showing AMS 19 - Firebag

Site photos

The following photos show the environment surrounding the monitoring station.



Figure 4 – Environment looking North



Figure 5 – Environment looking East



Figure 6 – Environment looking South



Figure 7 – Environment looking West



Figure 8 – Meteorological Tower

Station Photos

The following photos show the monitoring station and instrumentation.

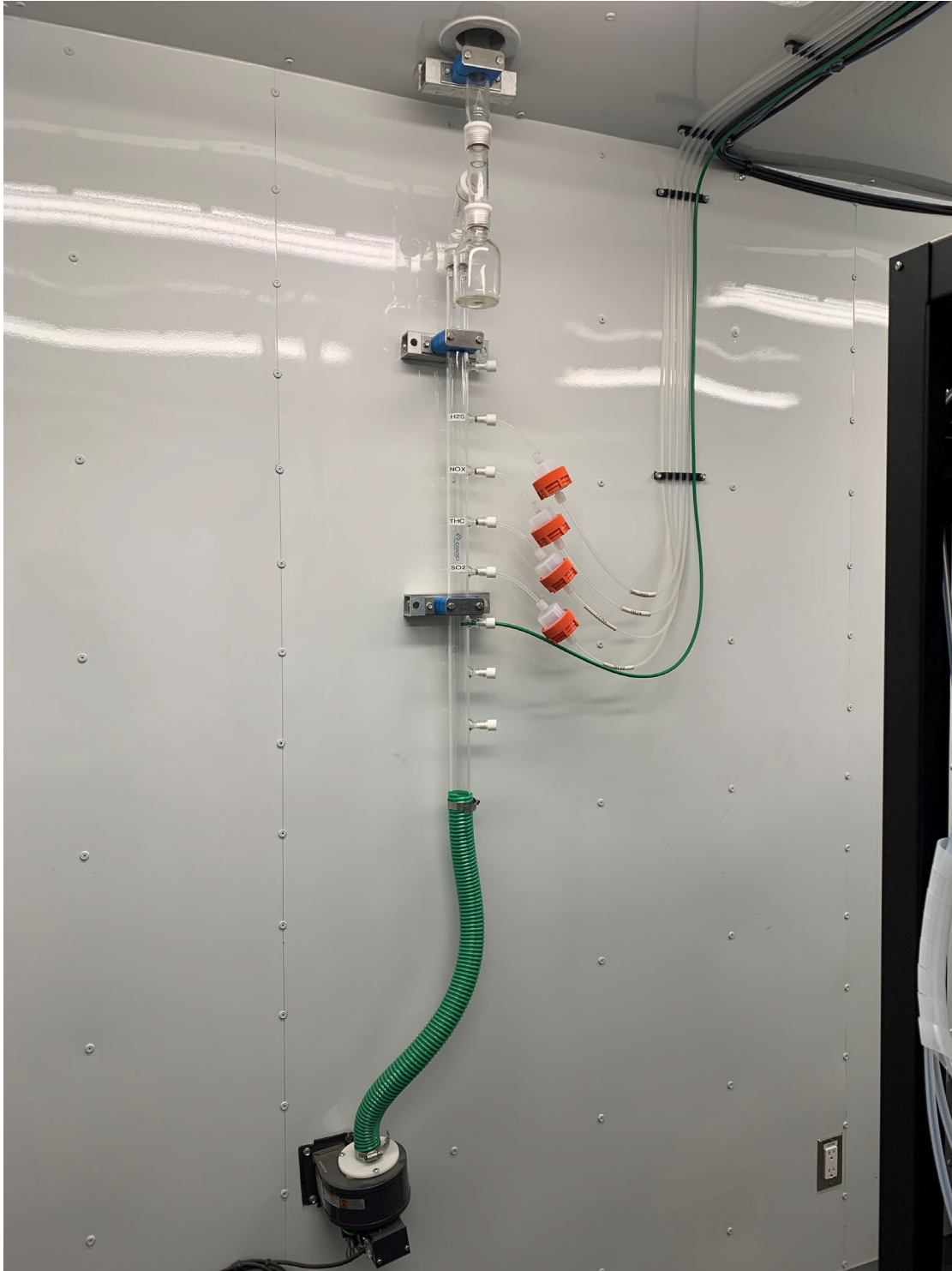


Figure 9 – Photo showing the inlet and sample manifold



Figure 10 – Curb shot of the monitoring station



Figure 11 –Photo of the front and the back of instrument rack



Wood Buffalo Environmental Association
Wind Rose 2019 - 2024

Wind Speed (WS) - km/h
Firebag

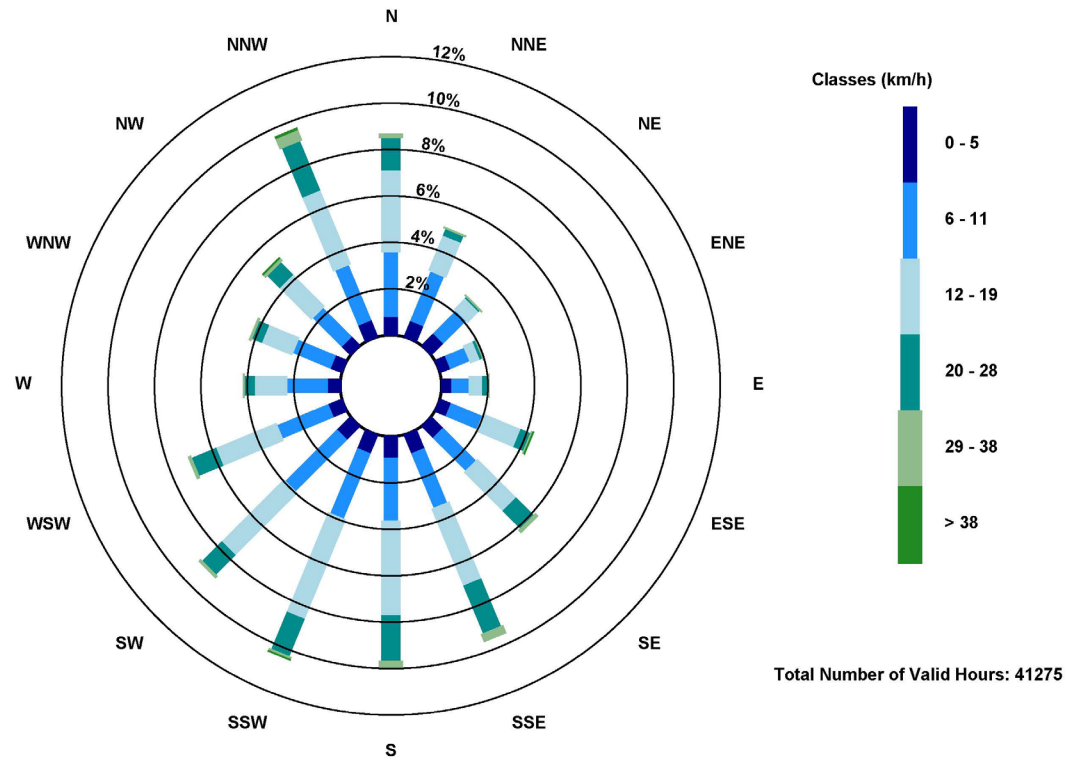


Figure 12 – Windrose (2019 – 2024)